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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,627	08/19/2003	Leslie G. Christie JR.	200300476-1	6939

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EXAMINER

SNIEZEK, ANDREW L

ART UNIT PAPER NUMBER

2651

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/644,627

Applicant(s)

CHRISTIE ET AL.

Examiner

Andrew L. Snizek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-11, 13-15, 17, 18, 20 is/are rejected.
- 7) ☒ Claim(s) 6, 12, 16 and 19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 7-11, 13-14, 18, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Nukada et al.

Concerning claim 7; Nukada et al. teaches an apparatus (figure 3) including a light source (86) an eclipsing device(72), a light sensor (88) and a position unit (94) satisfying the claimed limitations.

Re claim 8; The eclipsing device (72) monotonically blocks the light as discussed in column 6, lines 43-63.

Re claim 9; light sensor (88) converts the amount of light detected to an electrical signal.

Re claim 10; head displacement position unit (94) conforms the electrical signal to a position function by the use of a standard signal and comparator depicted in figure 3.

Re claim 11; Column 6, lines 43-63 indicates that the amount of light varies due to the rate of obstruction of the protrusion. The signal produced from photoelectric conversion device (88) is therefor a linear function when used with comparator provided in displacement unit (94).

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Re claims 1-5; Method claims 1-5 are drawn to the method of using the corresponding apparatus claimed in claims 7-11. Therefore method claims 1-5 correspond to apparatus claims 7-11 and are rejected for the same reasons of anticipation (obviousness) as used above.

Re claim 13; Nukada et al. teaches a tape drive (figure 3) including a tape transport (figure 2), a tape head (16), an actuator (24), an optical sensor (86, 72, 88) and a position controller (94, 98, 100, 102) that satisfies the claimed limitations.

Re claim 14; see light source (86), flag (72) and detector (88).

Re claim 18; this claim is similar to claims 4 and 10 and therefor satisfied by Nukada et al. as previously explained.

Re claim 20; The light source and detector as taught by Nukada et al. are collectively housed by a housing of the tape recorder (not depicted) and are in opposition with each other.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

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under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 15, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nukada et al. in view of de Niet et al.

The teaching of Nkada et al. is discussed above and incorporated herein. Although a light source comprising a LED (claim 15) and a detector comprising a photodiode (claim 17) are not taught by Nukada et al., such elements are well known in similar devices as taught by de Niet et al., elements (6, 9 and 7, 10) for position control of a head. It would have been obvious to replace one type of light source/detector as taught by Nukada et al. with another well known light source/detector including LED and photodiode as taught by de Niet et al. since each produce similar results.

#### ***Allowable Subject Matter***

6. Claims 6, 12, 16 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: The claimed tapered slot used in the arrangement, as set forth in claim 16/14/13 is neither taught by nor an obvious variation of the art of record. The claimed position controller comprising a processor, program memory and position function conformer instruction sequence as set forth in claim 19/14/13 is nether taught by nor on

obvious variation of the art of record. The claimed method as set forth in claim 6/4/1 and apparatus as set forth in claim 12/7 that uses a segmented function to conform an electrical signal to a position function is neither taught by nor an obvious variation of the art of record.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Carter teaches a similar flag arrangement attached to a magnetic head.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew L. Sniezek whose telephone number is 571-272-7563. The examiner can normally be reached on Mon.-Fri..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

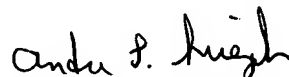
Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Andrew L. Sniezek  
Primary Examiner  
Art Unit 2651

A.L.S.  
5/13/05